

STATE OF MISSOURI PERFORMANCE FUNDING FOR
HIGHER EDUCATION

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Missouri Department of Higher Education
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TABLE OF CONTENTS

Background	
<i>National</i>	Page 02
<i>State</i>	Page 02
Implementation of the Performance Funding Model	
<i>Performance Measures</i>	Page 03
<i>Sustained Excellence</i>	Page 03
<i>STEM Weighting</i>	Page 04
Public Two-Year Institution Performance Plan	
<i>Choice of Performance Measures and Comparator Groups</i>	Page 06
<i>Individual Institution Performance Measures</i>	Page 07
Public Technical College Performance Plan	
<i>Choice of Performance Measures and Comparator Group</i>	Page 08
Public Four-Year Institution Performance Plan	
<i>Choice of Performance Measures and Comparator Groups</i>	Page 09
<i>Individual Institution Performance Measures</i>	Page 10
<i>Individual Institution Comparator Groups</i>	Page 11

BACKGROUND

National

The history of performance funding nationally began with the question of accountability on campuses – how much oversight is needed, and who maintains institutional standards of excellence? Since the 1980s, performance-based accountability has taken three forms: Performance funding, which links state funds directly to how an individual campus does on performance metrics; performance budgeting, which is less formulaic and rigorous, but still takes into consideration a college's outcome; and performance reporting, which does not tie into funding at all but is reported to policy makers and the public who can then hold the schools accountable in different ways.

In recent years, there has been a strong push towards performance funding for higher education. As a result, 24 states – Arizona, Arkansas, Florida, Hawaii, Illinois, Indiana, Kansas, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Mississippi, New Mexico, Nevada, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, Utah and Washington – have adopted performance metrics for the allocation of funding, the majority of which apply to both two- and four-year institutions. Five additional states – Colorado, Georgia, Montana, South Dakota and Virginia – are in the process of creating their own performance funding model which will be adopted upon completion. These numbers are drastically different even from 2013. That year, only 12 states had implemented a performance funding system, while four were in the process of adoption.

State

Missouri has a history of allocating additional state resources on the basis of performance through the Funding for Results program from the late 1990s. However, there has been no visibility or implementation strategy for performance funding since then, with the exception of the unsuccessful budget requests for pilot projects that the Coordinating Board has consistently brought forward. With national trends in higher education finance moving towards a greater emphasis on performance driving the allocation of state dollars, the time was right for Missouri to revisit performance funding and develop a new model.

The HEF model, the Coordinating Board's existing funding policy, is predicated on a stable and adequate base funding. With the state funding situation being characterized by core cuts in bad years, and no increases in better years since 2007, there have been no adjustments in the base for differential enrollment increases, changes in program mix, inflationary costs that must be borne by institutions, etc.

While there has been activity in the strategic initiative component of the HEF model, the performance funding component has been the least developed, prompting the commissioner to establish the Performance Funding Task Force in early 2011. The Task Force's recommendations were adopted the following year by the Coordinating Board for Higher Education, and legislation has since been adopted that closely follows those recommendations.

IMPLEMENTATION OF PERFORMANCE MEASURES

In the development of their respective sets of performance indicators, each sector sought measures with certain key characteristics. These characteristics include:

1. Reliance on existing and externally validated data
2. Alignment with established statewide goals
3. Being straightforward in nature and easily understood

All performance measures are evaluated based on a three-year rolling average with success being defined for each institution individually as improvement over that institution's performance from the previous year, or, when applicable, maintenance of a high level of performance in relation to a previously established and externally validated threshold. The base year for each measure is also a three-year average, and all numbers are reported in tenths.

Legislation containing the performance funding process was passed during the 2014 legislative session as part of SB 492. The core funding for each institution would begin as what was appropriated in fiscal year 2015, and at least 90 percent of any increase to that core funding would come from institutional success on adopted performance measures (see Performance Measures for more information). The remaining ten percent of any increase will be distributed to address inequitable state funding determined on a per-student basis and based on weighted full-time equivalent credit hours. What is earned becomes the new core funding level, and the process repeats as new funding becomes available.

Performance Measures

The current model contains five performance indicators for each institution, and institutions could earn one-fifth of the increase in funding allocated to performance by demonstrating success on one of its five measures. If an institution demonstrates success on two measures, then it would earn two-fifths of the money, etc., while an institution succeeding on all five measures would receive 100% of the performance funding increase.

SB 492 (2014) requires the addition of a sixth measure relating to graduate outcomes that is used as long as the unemployment rate in the state does not increase from the previous calendar year. It is currently envisioned that a "pilot" approach will be used to introduce this measure, which would mean no performance funding would be dependent on this measure during the pilot period. Doing so would allow assessment of the validity of the measure as well as sufficient time to make necessary improvements. Once the additional measure is fully established, institutions could earn one-sixth of the increase in funding allocated to performance by demonstrating success on each of its six measures.

Sustained Excellence

For public four-year institutions and State Technical College of Missouri, the second component is benchmarks upon which sustained excellence is measured in lieu of improvement over the previous year. This component acknowledges that institutions that have achieved a level of excellence on a particular measure have little room for improvement but should be encouraged to sustain this high level over time. Performance in the top third of the relevant comparator group is the threshold for sustained excellence for all institutions. However, for the "Improvements on

professional/occupational licensure tests” measure, sustained excellence is considered to have been met with a passage rate of 90 percent or above. If external benchmarks for sustained excellence are not established for a particular measure, or the threshold is not met by an institution, then improved performance over the previous year using the three-year rolling average is the sole method used to evaluate success on that measure.

STEM Weighting

The final component is the incorporation of a special weighting factor for STEM completions into any existing measure where applicable and appropriate, including measures that involve actual degree completions such as completion rates and total degree production.

STEM fields include a wide range of disciplines, and there are different ways to identify the disciplines included in STEM. For example, the National Science Foundation defines STEM fields broadly, including not only mathematics, natural sciences, engineering and computer and information sciences, but also social/behavioral sciences such as psychology, economics, sociology and political science. A similar and somewhat narrower list is published by the federal Immigration and Customs Enforcement that deals with student visas. In April of 2011, the National Center for Education Statistics issued a report entitled, “Postsecondary Awards in Science, Technology, Engineering and Mathematics, by State: 2001 and 2009,” that used some, but not all of the fields published by ICE. Thus, there is no one generally accepted list of STEM instructional programs used by the federal government or the higher education community. For our purposes, the STEM fields closely mirror the ones used by the NSF and in the NCES study but add fields of particular importance to Missouri such as agriculture, natural resources/conservation and the STEM education fields.

STEM Fields for Missouri Performance Funding (by CIP code):

- 01- Agriculture, agriculture operations and related sciences
- 03- Natural resources and conservation
- 10- Communication technologies/technicians and support services
- 11- Computer information sciences and support services
- 13- Education (STEM-related: 13.063, 13.1309, 13.1311, 13.1316, 13.1319, 13.1320, 13.1321, 13.1322, 13.1323, 13.1329, 13.1335)
- 14- Engineering
- 15- Engineering technologies and engineering-related fields
- 21- Technology education/industrial arts
- 26- Biological and biomedical sciences
- 27- Mathematics and statistics
- 29- Military technologies and applied sciences
- 30- Interdisciplinary Studies (STEM-related: 30.0101, 30.0601, 30.0801, 30.1001, 30.1801, 30.1901, 30.2501, 30.3201)
- 40- Physical sciences
- 41- Science technologies/technicians
- 47- Mechanic and repair technologies/technicians

It is important that the model recognize the contributions community colleges make toward STEM graduates beyond their own AS and AAS STEM graduates. This requires a component to account

for transfer and AA students who eventually earn STEM bachelor's degrees at Missouri public universities. As a result, STEM weighting for community colleges includes any student who receives a STEM degree from a public university and had successfully transferred 30 hours or more from a community college.

Each additional STEM graduate over the relevant baseline is given an additional 50 percent weight in each measure. An example to illustrate how this works for a given institution is provided below:

- Total graduates, 2011 – 500 in all fields
- Total graduates, 2012 – 515 (of the 15 additional graduates, four were in the STEM fields)
- Thus, the total number of 2012 STEM-weighted graduates counted for performance funding would be $515 + (4 \times 0.5) = 515 + 2 = 517$.

PUBLIC TWO-YEAR INSTITUTION PERFORMANCE PLAN

Based on recommendations from the Missouri Community College Association, the following performance indicators were adopted for all community colleges:

Student Success and Progress

1. Three-year completion rate for first-time, full-time entering students, including students who successfully complete* a certificate or degree of at least one year or longer or successfully transfer to a four-year institution
2. Percentage of developmental students who successfully complete* their last developmental English course and then successfully complete* their first college-level English course
3. Percentage of developmental students who successfully complete* their last developmental math course and then successfully complete* their first college-level math course.

Increased Degree Attainment and Quality of Student Living

4. Percentage of career/technical graduates who pass their required licensure/certification examination

Financial Responsibility and Efficiency

5. Addressed with institution-specific measures (see page 7)

Graduate Outcomes

6. TBD

Success on each measure is defined as improvement over the previous year's performance (both measured with three-year rolling averages) or, where applicable and appropriate, sustained performance in the top third of the National Community College Benchmarking Project – a comprehensive national data collection and reporting consortium designed for two-year colleges with over 280 colleges participating nationwide, including all Missouri community colleges – or other externally validated benchmark. Measures 1, 2 and 3 are part of the NCCBP data set, making it a simple task to compare the results of Missouri's institutions with those across the country.

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Comparator Group

As referenced above, the NCCBP was established as the community college comparator group for the sustained excellence component of the model.

*'Successfully complete' as defined by the institution

PUBLIC TWO-YEAR INSTITUTION PERFORMANCE PLAN, INSTITUTIONAL MEASURES

Public two-year institutions are addressing the financial responsibility and efficiency component of the model with institution-specific measures. Below is the measure chosen by each respective institution:

Crowder College: Number of credit hours completed per \$100,000 of state appropriations – success is an increase in this ratio

East Central College: Expense and general expenditures per credit hour completed – success is a reduction in this ratio

Jefferson College: Number of credit hours completed per \$100,000 of state appropriations – success is an increase in this ratio

Metropolitan Community Colleges: Instructional expense per credit hour – success is an increase in this ratio or maintenance in the top third of the NCCBP

Mineral Area College: Number of credit hours completed per \$100,000 of state appropriations – success is an increase in this ratio

Moberly Area Community College: Number of credit hours completed per \$100,000 of state appropriations calculated as a three-year rolling average – success is an increase in this ratio

North Central College: Number of credit hours completed per \$100,000 of state appropriations and local tax collections – success is an increase in this ratio

Ozarks Technical Community College: Number of credit hours completed per \$100,000 of state appropriations – success is an increase in this ratio

St. Charles Community College: Persistence rates for incoming fall, full-time and part-time students – success is an increase in this rate

St. Louis Community Colleges: Actual revenue per actual credit hour would include all types of revenue received by the college in a fiscal year – success is a decrease in this ratio

State Fair Community College: Number of credit hours completed per \$100,000 of state appropriations and local tax collections – success is an increase in this ratio

Three Rivers Community College: Number of credit hours completed per \$100,000 of state appropriations and local tax collections – success is an increase in this ratio

PUBLIC TECHNICAL COLLEGE PERFORMANCE PLAN

The following performance indicators were adopted for the State Technical College of Missouri:

Student Success and Progress

1. Three-year graduation rate
2. Freshman-to-sophomore retention rate

Student Placement and Quality of Student Learning

3. Job placement (180 day follow-up)
4. Improvements in assessments in the major field

Financial Responsibility and Efficiency

5. Completions to FTE Ratio

Success on each measure is defined as improvement over the previous year's performance (both measured with three-year rolling averages) or, where applicable, sustained performance relative to an external benchmark (see below).

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Comparator Group

The comparator group chosen by State Technical College of Missouri is a national group of fifteen technical colleges with similar program mix that do not issue degrees or certificates in Arts and Humanities. The comparator group for job placement and learning assessment measures is all Missouri two-year institutions.

PUBLIC FOUR-YEAR INSTITUTION PERFORMANCE PLAN

Based on recommendations from the Council on Public Higher Education, the following performance indicators were adopted for public four-year colleges and universities:

Student Success and Progress

1. Freshman-to-sophomore retention rate OR
2. First-time, full-time freshmen successfully completing* 24 hours in their first academic year

Increased Degree Attainment

3. Total degrees awarded OR
4. Six-year cohort graduation rates

Quality of Student Learning

5. Improvements in assessment of general education OR
6. Improvements in assessments in the major field OR
7. Improvements on professional/occupational licensure tests

Financial Responsibility and Efficiency

8. Percent of total education and general expenditures expended on the core mission (instruction, research and public service) OR
9. Increase in educational revenue (state appropriations plus net tuition revenue) per full-time equivalent student at or below the increase in the consumer price index

Graduate Outcomes

10. TBD

Mission specific measure

11. Addressed with institution-specific measures (see page 10)

Success on each measure is defined as improvement over the previous year's performance – both measured with three-year rolling averages – or, where applicable, sustained performance relative to an external benchmark.

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Comparator Group

Public four-year institutions operationalized the establishment of external benchmarks by each delineating a group of comparator institutions. These peer groups represent an external comparison and in nearly all cases were established for internal purposes prior to the development of the performance funding model (see page 11).

*'Successfully complete' as defined by the institution

PUBLIC FOUR-YEAR INSTITUTION PERFORMANCE PLAN, INSTITUTIONAL MEASURES

Public four-year institutions are addressing the fifth component of the model with institution-specific measures. Below is the measure chosen by each respective institution:

Harris-Stowe State University (2, 3, 7, 9): External funding received by the institution as a percentage of state appropriations

Lincoln University (2, 3, 7, 8): The percentage of students in the freshman cohort who successfully complete English 101 within the first three semesters of enrollment

Missouri Southern State University (1, 3, 7, 9): Percentage of students in the freshman cohort who are successfully retained after participating in a first-year learning community

Missouri State University (2, 4, 7, 8): Increased number of graduates in STEM, health care and other critical disciplines of need in the future workforce

Missouri Western State University (1, 4, 5, 8): The number of students each year who have participated in research, projects or creative activities that have resulted in a peer-reviewed publication, presentation, performance, exhibit or external award

Northwest Missouri State University (1, 4, 5, 8): Percent of full-time, first-time degree- or certificate-seeking undergraduate students receiving institutional grant aid

Southeast Missouri State University (1, 3, 7, 8): The percentage of academic programs delivered with a direct instructional expense per credit hour below the mean of the peer group using a rolling three-year average

Truman State University (1, 4, 6, 8): Improved critical thinking as measured through the senior capstone experience

University of Central Missouri (2, 3, 5, 8): Number of graduates earning degrees in professional and applied technology disciplines

University of Missouri (1, 4, 7, 8): Federally financed research and development expenditures as reflected in: total federally financed R&D expenditures, the percentage share (market share) of all dollars expended that year or the rank of the university

PUBLIC FOUR-YEAR INSTITUTION PERFORMANCE PLAN, PEER GROUPS

The public four-year institutions have chosen their own comparator groups as follows:

Harris-Stowe State University:

- A set of institutions with similar demographics

Lincoln University:

- All public four-year Historically Black Colleges and Universities with an enrollment between 1,000 and 5,000

Missouri Southern State University:

- A set of nine institutions with similar demographics

Missouri State University:

- The Coalition of Urban and Metropolitan Universities

Missouri Western State University:

- The Integrated Postsecondary Education Data System (IPEDS) list of open admission, public institutions with the Carnegie classification of baccalaureate or higher

Northwest Missouri State University:

- A set of 40 Public Master's I institutions with a similar freshmen ACT score, faculty salary and degree program mix (including education)

Southeast Missouri State University:

- A pre-existing group of fifteen institutions that Southeast uses for IPEDS-based internal research and comparisons
- For institutionally-developed performance funding measures, the comparator group will be the large, Master's level universities from the University of Delaware study of instructional costs and productivity.

Truman State University:

- The Council of Public Liberal Arts Colleges

University of Central Missouri:

- Fifteen institutions from the West North Central region of the American Association of University Professors Category IIA (Master's), which have comprehensive organization characterized by diverse post-baccalaureate programs – including first-professional – but do not engage in significant doctoral-level education

University of Missouri:

- Top third of public doctoral institutions, which apply to three of the four common measures: freshman-to-sophomore retention rate, six-year graduation rate and percentage of total E&G spent on core mission